

CLAIMS

1. A system for generating an executable code to be executed by a set of processors, said system comprising:

5 - reading means for reading an input document for describing a distribution of an image processing application over said set of processors, said input document comprising at least a module describing at least part of an image processing function to be applied to at least one input image by a processor of said set of processors, said input image being subdivided into image strips, said module comprising at least one input port for receiving image strips to be processed by said module via at least one input link and/or at least one output port for transmitting processed image strips over at least one output link, said input/output port being specified by a geometry and a law, said geometry defining a division of said input image into a set of image strips and said law defining a subset of said set of image strips that is to pass through said input/output port,

10 15 - compiling means for detecting inconsistencies in said input document,

- building means for building an executable code from said compiled document for programming said set of processors.

20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900 905 910 915 920 925 930 935 940 945 950 955 960 965 970 975 980 985 990 995 1000 1005 1010 1015 1020 1025 1030 1035 1040 1045 1050 1055 1060 1065 1070 1075 1080 1085 1090 1095 1100 1105 1110 1115 1120 1125 1130 1135 1140 1145 1150 1155 1160 1165 1170 1175 1180 1185 1190 1195 1200 1205 1210 1215 1220 1225 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10116 10117 10118 10119 10120 10121 10122 10123 10124 10125 10126 10127 10128 10129 10130 10131 10132 10133 10134 10135 10136 10137 10138 10139 10140 10141 10142 10143 10144 10145 10146 10147 10148 10149 10150 10151 10152 10153 10154 10155 10156 10157 10158 10159 10160 10161 10162 10163 10164 10165 10166 10167 10168 10169 10170 10171 10172 10173 10174 10175 10176 10177 10178 10179 10180 10181 10182 10183 10184 10185 10186 10187 10188 10189 10190 10191 10192 10193 10194 10195 10196 10197 10198 10199 10200 10201 10202 10203 10204 10205 10206 10207 10208 10209 10210 10211 10212 10213 10214 10215 10216 10217 10218 10219 10220 10221 10222 10223 10224 10225 10226 10227 10228 10229 10230 10231 10232 10233 10234 10235 10236 10237 10238 10239 10240 10241 10242 10243 10244 10245 10246 10247 10248 10249 10250 10251 10252 10253 10254 10255 10256 10257 10258 10259 10

6. A system as claimed in claim 3, wherein said law is parametrized by a rank and a period, said rank being the image strip index of a first image strip and said period being a difference between the indices of two consecutive image strips to be transmitted through said input/output port.

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7. A system as claimed in claim 1, wherein said input document has a graphical format.

10 8. An input document for describing a distribution of an image processing application over said set of processors, said input document comprising at least a module describing at least part of an image processing function to be applied to at least one input image by a processor of said set of processors, said input image being divided into image strips, said module comprising at least one input port for receiving image strips to be processed by said module via at least one input link and/or at least one output port for transmitting processed image strips over at least one output link, said input/output port being specified by a geometry and a law, said geometry defining a subdivision of said input image into a set of image strips and said law defining a subset of said set of image strips that is to pass through said input/output port

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20 9. A method of distributing an image processing application over a set of processors, said method comprising the steps of:

- reading an input document, said input document being designed for describing a distribution of an image processing application over said set of processors and comprising at least a module describing at least part of an image processing function to be applied to at least one input image by a processor of said set of processors, said input image being divided into image strips, said module comprising at least one input port for receiving image strips to be processed by said module via at least one input link and/or at least one output port for transmitting processed image strips over at least one output link, said input/output port being specified by a geometry and a law, said geometry defining a subdivision of said input image into a set of image strips and said law defining a subset of said set of image strips that is to pass through said input/output port,

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30 - compiling said input document for detecting inconsistencies in said input document,

- building an executable code from said compiled input document for programming said set of processors.

5 10. An executable code comprising a set of instructions which, when loaded into a set of processors, causes the set of processors to carry out the image processing application specified by the input document as claimed in claim 7.

10 11. A computer program comprising a set of instructions which, when loaded into a host processor, causes said host processor to carry out the method as claimed in claim 9.

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